

Sandia's binational lab concept broadened by US-Mexico workshop participants

By [Neal Singer](#)

A binational laboratory, set directly on the US-Mexican border to solve joint water problems and improve the region's economy, is a startling concept.

But when hesitant high-ranking Mexican funding officials asked how such a lab would help improve not just the border region but all of Mexico, Sandia's Advanced Concepts Group (ACG) -- originator of the joint national lab idea (Lab News, April 6) -- hosted a binational workshop Aug. 2 at the Albuquerque Marriott to seek answers to that question and others.

Among those attending were representatives from the North American Development Bank, Mexico's National Council for Science and Technology, the Mexico Electric Power Institute, the US Consul General, the Consulate of Mexico, DOE headquarters, and the offices of Senators Pete Domenici and Jeff Bingaman.

The concept of a border lab -- meant to be both symbol and reality of the joint interests of the two nations -- obviously interested the participants. They were agreeable but not intimidated by presentations featuring Sandia's technical achievements and Lab successes in partnerships with large and small businesses, starting others, and providing free technical advice. Attendees went beyond technical proficiency not only to discuss the possible benefits that could accrue beyond the border region but also to broaden the discussion to include the social and economic basis for such a lab. Speakers mentioned the necessity of providing decent sanitation, water, education, and cultural life before the lab could attract and retain the scientists needed to become an ongoing entity.

Local participation, joint leadership

Guillermo Fernandez of the US-Mexico Science Foundation stressed the importance of local involvement, consulting with community leaders, long-term strategic thinking, and identifying specific business opportunities. He also emphasized the necessity of joint participation rather than single leadership through "the strong articulation needed among the different actors to share, plan, and work in teams, as a way to educate and improve the actors that participate."

Other issues, raised by Pilar Noriega of the Monterrey Institute of Technology and Higher Education, included the necessity of an educated labor pool and successful Mexican methods of preventing high school dropouts: scholarships to students attending two-year technical schools with a prior agreement to immediately hire them, with greatly increased wages, upon graduation. Other participants discussed the importance of K1-12 education and higher education as foundations for improving technology and science throughout Mexico, and the benefit to the nation of a first-class lab to which scientists could come for a year or two and then return to their communities with new information and methods.

Emphasizing education's importance, Mexican economist Sarah Martinez Pellegrini discussed the possibility of technical centers springing up about the lab: "Companies interested in establishing themselves in a community look for educational profiles that match their markets."

Jessica Turnley of the Galisteo Consulting Group mentioned the work of the Appalachian and Mississippi Delta commissions, whose functions are to take systemic looks at social and economic conditions and help correct them. "A third possible area is along the border," she said.

Others mentioned the emergence of NAFTA in making Mexico more attractive for direct foreign investment, the possibility of changing Mexican laws to provide more incentives to science centers and businesses, and the possibility of Mexico teaming with US technology hubs in Austin, San Diego, Albuquerque, and Santa Fe (i.e., Los Alamos).

Sandia workshop leader Gerry Yonas, VP 16000, principal scientist, and head of ACG, welcomed the insights. "No one is smart as all of us [together]," he said. Analyzing the responses, he said, "Given these complexities in time and space, we need a map with all these areas itemized." The roadmap would have long-term and short-term goals expressed in local, regional, and national applications. The map would include factors such as education, resources, and financial opportunities small and large.

Economic development as a force for peace

"Columbus had a map. We need one too," he said. He said he realized that Columbus thought he was going to India, but with a map, everything worked out OK nevertheless.

Sandia's Advanced Concepts Group was created to examine the long-term security needs of the nation, find potential problems that might threaten national or world peace, and, if possible, prevent them from occurring or demonstrate a method of doing so.

"It's easier, cheaper, and less painful for everybody to engage in preventive defense -- to prevent conflicts that occur at borders, boundaries, and between haves and have-nots -- rather than deal with it when it happens," Gerry said. "We first started thinking about economic development as a force for peace in the Middle East. We didn't get there in time, as you probably know. We should've gotten there, oh, about a thousand years ago." -- [*Neal Singer*](#)